# APPARATUS AND METHOD FOR ISOLATING
# NOISE EFFECTS IN A SIGNAL

## ABSTRACT OF THE DISCLOSURE

A matrix includes samples associated with a first signal and samples associated with a second signal. The second signal includes a first portion associated with the first signal and a second portion associated with at least one disturbance, such as white noise or colored noise. A projection of the matrix is produced using canonical QR-decomposition. Canonical QR-decomposition of the matrix produces an orthogonal matrix and an upper triangular matrix, where each value in the diagonal of the upper triangular matrix is greater than or equal to zero. The projection at least substantially separates the first portion of the second signal from the second portion of the second signal